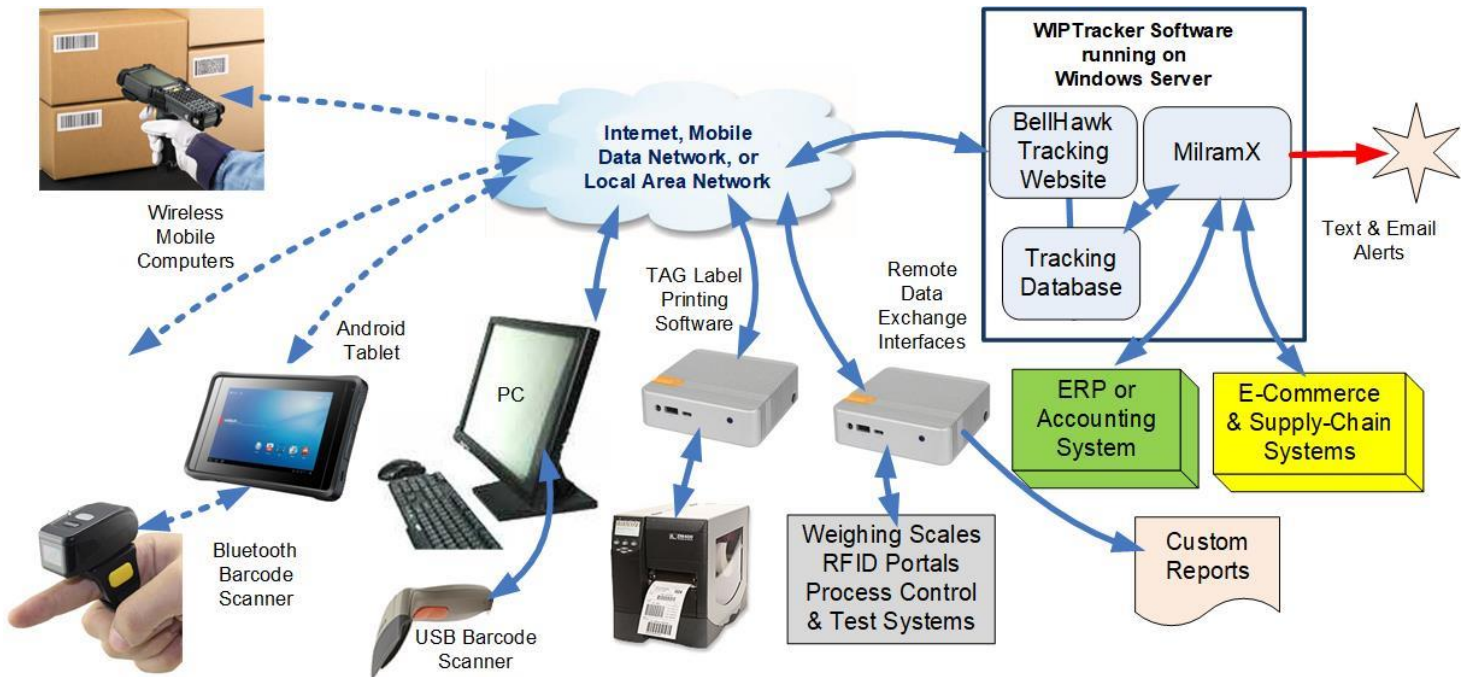## KnarrTek WIPTracker™ Custom Real-Time Operations Tracking Solutions

Overview

The KnarrTek JTS, MTS, and JMTS systems meet the needs of a wide-variety of barcode tracking applications in most manufacturing plants and industrial distribution warehouses. There are still circumstances, however, where these standard systems do not have the desired capabilities.

To meet these special requirements, KnarrTek also provides custom WIPTracker solutions based on the BellHawk real-time work-in-process, job and materials tracking platform and the MilramX distributed automated information exchange software platform, which are also used as the basis of KnarrTek's standard JTS, MTS, and JMTS products.

WIPTracker projects start out with a system design-phase, if the application is complex, or the agile implementation of a pilot system, if the application is limited in scope and well defined, or a combination of the two. This then leads to the creation of an implementation plan and a phase-by-phase estimate for the non-recurring implementation cost plus an estimate of the annual rental cost for the BellHawk and MilramX software to be used in implementing the system.

The initial proposal for the design-phase or pilot from KnarrTek will typically give an estimate cost for these activities plus, if feasible, a budgetary cost for the overall system and the expected annual rental cost. Clients are then expected to prepay for the design/pilot phase, followed by prepayment on a phase-by-phase basis plus the BellHawk and MilramX software rental fees for operational use of the software as the system incrementally goes live.

Please note that it is generally less expensive to use a standard KnarrTek JTS, MTS, or JMTS product, and to use the standard DEX/MDEX interface, where possible, and to pay for support services incrementally, using Support Services Bundles, as needed. This is because you are taking advantage of the cost savings from using bundles of BellHawk software modules in the standard products and not paying for each individually.

Using KnarrTek's standard products are analogous to buying a standard Compact, 1500, or 2500 pickup truck, with a limited range of options, rather than ordering a heavy-duty custom-built truck on a line-item feature-by-feature basis, which usually is significantly more expensive and is analogous to KnarrTek's WIPTracker solutions. But when you need a heavy-duty pickup truck or a WIPTracker system then the investment can be well-worthwhile.

Capabilities that Require WIPTracker

Generally, all the features that are only available within a WIPTracker solution are those that typically require customization of the BellHawk code or the writing of MilramX Data Transfer Objects or Intelligent Agents. These include:

1. Interfaces to weighing scales to automatically capture the weight and integrate the weights into BellHawk data entry transactions.

2. Interfaces to process control systems and test stands to automatically feed the setup parameters to the equipment and to capture resultant process parameters and test results to incorporate these into the BellHawk traceability records.

3. Interfaces to RFID equipment to automatically track assets, products, boxes, and pallets as they move within a factory or warehouse as well as tracking the unloading and loading of trucks/trailers.

4. Implementation of application-specific warnings to be given to users as they perform data entry transactions. These typically require modifications of the BellHawk transactions.

5. Implementation of Email or text-message Alerts to be sent to staff or managers when MilramX discovers a situation that needs their attention based on monitoring the BellHawk database and possibly those of the ERP or E-Commerce systems. These always require implementing custom MilramX DTOs.

6. Implementation of interfaces to ERP, CAD, E-Commerce, and accounting systems that require the development of new MilramX DTOs or the customization of existing DTOs, rather than using the MDEX interface. This includes the implementation of interfaces to QuickBooks Enterprise as well as to ERP systems such as those sold by Sage and Microsoft.

7. Tracking of setup, run, down, and clean-up times of machines, equipment, and process lines. While these can be captured using barcode scanning, it is much more efficient to handle this through an interface to the PC or PLC controlling the equipment.

8. Allocating costs across multiple jobs run at the same time on a common machine. Examples include printing, coating, slitting, and sheeting of large rolls of paper or plastic

or metal. They also include the cutting of parts for multiple jobs from a common sheet of steel, plastic, or wood.

9. Implementing custom real-time job scheduling and demand/pull based materials planning algorithms.

10. Modification of the TAG label printing software to work with label printing software other than BarTender Automation or to print labels on specialty equipment.

Commentary

Customizations by KnarrTek's staff of standard reports and documents printed out by JTS, MTS, and JMTS or Excel exports produced by these standard products do not require a WIPTracker solution as these are normally handled on an hourly rates basis as part of each client's prepaid support account.

KnarrTek's WIPTracker solutions are based on the BellHawk real-time work-in-process, job and material tracking software platform and the MilramX distributed automated information exchange software platform, which are licensed by KnarrTek from Milramco LLC. For more details about this software, please see the "BellHawk Software Handbook", which describes this software in greater detail.

For more information

Please send an Email to Sales@KnarrTek.com or see www.KnarrTek.com for more details.